

EXHIBIT A

INTEL INVENTION DISCLOSURE

ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

INTEL CONFIDENTIAL

DATE: 14461

Wireless Comm / NBG/eWave

It is important to provide accurate and detailed information on this form. The information will be used to evaluate your invention for possible filing as a patent application. When completed and signed, please return this form to the Legal Department at JPS-147. If you have any questions, please call 264-0444.

1. Inventor: Tou Last Name Jarvis First Name C Middle Initial
 Phone (858) 385-4562 M/S: SN1-01 Fax # (858) 385-4468
 Citizenship: USA WWID 10050113 Contractor: YES NO X
 Inventor E-Mail Address: jarvis.c.tou@intel.com
 Home Address: 917 E. Cathedral Rock Dr. (moving)
 City Phoenix State AZ Zip 85048 Country USA
 *Corporate Level Group (e.g. IABG, NCG, CEG) NBG Division eWave Subdivision
 Supervisor Bill Addison WWID Phone (858) 385-4464 M/S: SN1-01

Inventor: Davenport Last Name Mark First Name D Middle Initial
 Phone (858) 385-4551 M/S: SN1-01 Fax # (858) 385-4468
 Citizenship: USA WWID 10575265 Contractor: YES NO X
 Inventor E-Mail Address: mark.d.davenport@intel.com
 Home Address: 11243 S. Palisade View Dr. (moving)
 City South Jordan State UT Zip 84006 Country USA
 *Corporate Level Group (e.g. IABG, NCG, CEG) NBG Division eWave Subdivision
 Supervisor Bill Addison WWID Phone (858) 385-4464 M/S: SN1-01

RECEIVED

Inventor: Collins Last Name Paul First Name PATENT DATABASE GROUP Middle Initial
 Phone (858) 385-4556 M/S: SN1-01 Fax # (858) 385-4468
 Citizenship: USA WWID 10575265 Contractor: YES NO X
 Inventor E-Mail Address: paul.a.collins@intel.com
 Home Address: 97 West State Hwy 48
 City Copperton State UT Zip 84006 Country USA
 *Corporate Level Group (e.g. IABG, NCG, CEG) NBG Division eWave Subdivision
 Supervisor Mark Davenport WWID 10575265 Phone (858) 385-4464 M/S: SN1-01

PATENT DATABASE GROUP
INTEL LEGAL TEAM

"If you are unsure of this information, please discuss with your manager."

(PROVIDE SAME INFORMATION AS ABOVE FOR EACH ADDITIONAL INVENTOR)

- Title of Invention: A method and apparatus for simultaneous antenna deployment and power control in a PC Card
- What technology/product/process (code name) does it relate to (be specific if you can):
Wireless Personal Wireless PC Card
- Include several key words to describe the technology area of the invention in addition to #3 above:
Wireless Personal Wireless PC Card

INTEL CONFIDENTIAL

- _____, wireless, antenna, PC Card, power switch, power control _____
5. Stage of development (i.e. % complete, simulations done, test chips if any, etc.)

10% complete, in prototype hardware development

6. (a) Has a description of your invention been, or will it shortly be, published outside Intel?

NO: X YES: _____ If YES, was the manuscript submitted for pre-publication approval? _____

IDENTIFY THE PUBLICATION AND THE DATE PUBLISHED: _____

- (b) Has your invention been used/sold or planned to be used/sold by Intel or others?

NO: _____ YES: X DATE WAS OR WILL BE SOLD: _____

INTEL CONFIDENTIAL
ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

- (c) Does this invention relate to technology that is or will be covered by a SIG (special interest group)/standard or specification? NO: X YES: _____ Name of SIG/Standard/Specification: _____
- (d) If the invention is embodied in a semiconductor device, actual or anticipated date of tapeout? N/A
- (e) If the invention is software, actual or anticipated date of any beta tests outside Intel N/A
7. Was the invention conceived or constructed in collaboration with anyone other than an Intel blue badge employee or in performance of a project involving entities other than Intel, e.g. government, other companies, universities or consortia? NO: _____ YES: X Name of individual or entity: Electronics Corp.
8. Is this invention related to any other invention disclosure that you have recently submitted? If so, please give the title and inventor: No

**PLEASE READ AND FOLLOW THE DIRECTIONS ON
HOW TO WRITE A DESCRIPTION OF YOUR INVENTION**

Please attach a description of the invention to this form, DATED AND SIGNED BY AT LEAST ONE PERSON WHO IS NOT A NAMED INVENTOR, and include the following information:

1. Describe in detail what the components of the invention are and how the invention works.

An antenna contained in a PC card form factor that when deployed (ejectable, pop-out, swing-out, flip-out, etc.) will also trigger power to be applied to the enclosed circuits, including the radio, both mechanically and through software control. See figure below for a pop-out antenna illustration (preferred mode).



In this scenario, in order to use the device, a user would deploy the antenna (popped-out in above illustration) and the action would power-on the PC Card device through both a mechanical switch and setting appropriate software registers for a clean power-on sequence. Conversely, when the user has completed using the device, the antenna would be stowed (pushed-in in above illustration) and the PC Card device would both set the appropriate software registers for a clean power-down sequence, as well as switch off the power mechanically.

2. Describe advantage(s) of your invention over what is done now.

To definitively and mechanically power down or cut power to a PC Card today, it must be either ejected, or an externally accessible miniature switch must be implemented (no known examples). This allows a single action in deploying an antenna which is needed in a wireless PC Card device to simultaneously apply power. And in reverse, the stowage of the antenna simultaneously turns off the power.

INTEL CONFIDENTIAL

3. **YOU MUST include at least one figure illustrating the invention. If the invention relates to software, include a flowchart or pseudo-code representation of the algorithm.**

See above figure.

3. **Value of your invention to Intel (how will it be used?).**

Will be used for wireless PC Card products as a feature differentiator. Solves a concern from mobile PC users when they need to use a wireless PC Card. For example, wireless devices on board and airplane must be turned off during takeoff and landing. This invention helps assure that the radio is indeed turned off as the antenna will be stowed.

5. **Explain how your invention is novel. If the technology itself is not new, explain what makes it different.**

Antenna stowage assures radio is not emitting.

6. **Identify the closest or most pertinent prior art that you are aware of.**

none

7. **Who is likely to want to use this invention or infringe the patent if one is obtained and how would infringement be detected?**

PC Card manufacturers. Products would appear in the market, or during industry level interoperability testing.

***HAVE YOUR SUPERVISOR READ, DATE AND SIGN COMPLETED FORM**

DATE

SUPERVISOR: 

BY THIS SIGNING, I (SUPERVISOR) ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS DISCLOSURE, AND RECOMMEND THAT THE HONORARIUM BE PAID